

Notice of Allowability

Application No.

10/031,899

Applicant(s)

RUEGENBERG ET AL.

Examiner

Tina M Lin

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☒ The drawings filed on 19 January 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>0402</u> . | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____ |

Receipt from the International Bureau is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) in this national stage application, which papers have been placed of record in the file.

Examiner's Statement Of Reasons For Allowance

The following is an examiner's statement of reasons for allowance: The prior art of record in this application does not disclose or reasonably suggest a configuration for an optical coupling device with a variable-length element supporting one waveguide with an endface and fixed to another waveguide endface by a holding block, a variable-length temperature compensating element connected to the variable-length element and fixed to another holding block, where the variable-length element changes by the same amount in the opposite direction as the variable-length compensating element and the position of one of the waveguides is varied with respect to the other waveguide by movement of the variable-length element. A close prior art of record is U.S. Patent 4,657,339 to Fick. Fick discloses a fiber optic coupling device with two optical waveguides having endfaces and adjusting elements to move the waveguides in the axial or transverse direction. However, Fick discloses the waveguides to be held by a strip, which is further supported by a housing and the adjustment elements not to be a temperature variable-length element. On the contrary, Applicant discloses the fibers to be held by the temperature-compensating device, where the fiber is moved by the change in the temperature by the variable-length element and the variable-length compensating element. Another close prior art of record is U.S. Patent 5,844,667 to Maron. Maron discloses a temperature sensitive device with two compensating members, which changes the length/distance of the optical fiber with the connecting members depending on the pressure. Although Moran discloses a variable-length

element and a variable-length compensating element, the structure and arrangement of Maron's device is different. Although the fiber moves laterally, like Applicant's claimed device, one portion of the compensating elements in Maron's device is stationary, where the other moves. In Applicant's structure, both variable members are moved depending on the temperature. Another close prior art is WO98/13718 to Albrecht et al. Albrecht et al. discloses two fiber endfaces coupled together by a temperature-compensating element. The temperature-compensating element moves the end surface of the fiber in relation to the other stationary fiber to couple the two fibers together. Although the structure is similar, Applicant claims two compensating elements to move in relation to each other where Albrecht et al. discloses only one moveable compensation element. Furthermore, Japanese Patent Abstract JP 57 042827 to Koyama et al. discloses two fiber ends connected to each other by two variable length-compensating elements. However, Koyama discloses the coefficient of thermal expansion of the variable length elements are different and therefore would expand or contract at different rates. On the other hand, Applicant specifically discloses the two variable-length elements to expand or contract by the same amount in opposite directions. Koyama also fails to disclose the two variable-length elements to be fixed to two different holding blocks. Lastly, German Patent DE 3716836 A1 to Paulukat discloses two fiber ends coupled together by two holding blocks, however, the movement of the fibers to be coupled is controlled by changing the state of the piezoelectric bodies and not from a change in temperature to move the elements the same distance in opposite directions.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

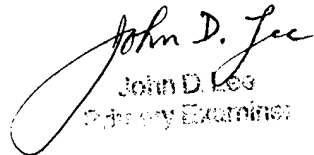
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References A and B discuss altering the coupling of waveguides through temperature compensation but fails to disclose the novel aspects of Applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M Lin whose telephone number is (703) 305-1959. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


TML


John D. Lee
Primary Examiner